REMARKS

Status of the Claims

Claims 1-25 are pending in the present Application. Claims 1, 12, 17, 18 and 20 are currently amended. Claim 5 is canceled. New claims 21-25 are added. Reconsideration and allowance of all of the pending claims is respectfully requested.

New matter is not being introduced into the Application by way of this amendment. Claims 1, 12, 17, 18 and 20 have been amended to recite that the flame retardant comprises a phosphorous-containing compound that is dispersible as solid particles in an organic solvent. Support for this amendment may be found in the specification at page 13, line 18-page 14, line 27 and original claim 5. In addition, claims 1, 12, 17, 18 and 20 have been amended to incorporate the limitation that an organosilicon compound is an organopolysiloxane, respectively. Support for this amendments may be found in the specification at page 18, lines 5-10. Claim 7 has been amended for a matter of form. New claims 21-25 have been added in accordance with the teachings at page 13, lines 18-26.

Claim Rejections – 35 U.S.C. §102 (pages 2-3 of the Office Action)

1. Oishi

Claims 1, 4, 7-10 and 12 are rejected under 35 U.S.C. 102 (e) as anticipated by Oishi at al (US 667620). For the following reasons, the Applicants respectfully traverse.

The rejection of pending claims 1, 4, 7-10 and 12 is overcome by the amendments to claims 1 and 12. Claims 1 and 12 are currently amended to recite that the flame retardant comprises a phosphorous-containing compound that is dispersible as solid particles in an organic solvent, respectively. The Applicants respectfully submit that Oishi et al. do not disclose such limitations.

Oishi et al. disclose a flame retardant composition comprised of a resin material, flame retardant magnesium hydroxide particles, curing agent and an organic solvent. However, the Applicants respectfully submit that Oishi et al. do not disclose phosphorous-containing compound particles as flame retardant particles.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The Applicants respectfully submit that all of the elements of the present claims are not disclosed or suggested by Oishi.

It is therefore respectfully submitted that the presently claimed varnish, and the formed material defined by the present claims is not anticipated by Oishi et al. Accordingly, withdrawal of this rejection is respectfully requested.

2. Yamamoto

Claims 1-5, 9, 12 and 18-20 are rejected under 35 U.S.C. 102 (b) as anticipated by Yamamoto et al (US 6319619). For the following reasons, the Applicants respectfully traverse.

The rejection of pending claims 1- 4, 9, 12 and 18-20 is overcome by the amendments to claims 1, 12, 18 and 20. Claims 1, 12, 18 and 20 are currently amended to recite that the flame retardant comprises a phosphorous-containing compound that is dispersible as solid particles in an organic solvent. Applicants submit that Yamamoto et al. do not disclose such limitations.

Yamamoto et al. disclose a semiconductor encapsulating resin composition comprised of a thermosetting resin, a hardening agent and a compound metal hydroxide of polyhedral crystal form. See Claim 1. Yamamoto et al. describe that where this particular compound metal hydroxide has an average particle diameter of 0.5-10 μ m, an excellent flame retardant effect can be obtained. See

Column 3, lines 59-64. However, the Applicants respectfully submit that Yamamoto et al. do not disclose phosphorous-containing compound particles as flame retardant particles.

The Office Action mentions that the particles of Yamamoto et al. are surface treated with a phosphorus compound (Column 7, line 60-column 8, line 8). However, Yamamoto et al. neither teach nor suggest phosphorus-containing compound particles surface treated with at least one surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organopolysiloxane and a dispersant having a carboxyl group as presently claimed.

The Applicants respectfully submit that all of the elements of the present claims are not disclosed or suggested by Yamamoto. It is therefore respectfully submitted that claims 1- 4, 9, 12 and 18-20 are not anticipated by Yamamoto et al. Withdrawal of this rejection is therefore respectfully requested.

Claim Rejections – 35 USC §103

Claims 1-20 are rejected under 35 U.S.C. 103 (a) as unpatentable over Imahashi et al (US 6130282). For the following reasons, this rejection is respectfully traversed.

Imahashi et al. disclose a flame retardant resin composition comprised of a flame retardant magnesium hydroxide particles and aluminum hydroxide particles, a synthetic resin and a solvent. Imahashi et al. describe that the magnesium hydroxide particles and the aluminum hydroxide particles can be treated with a surface treating agent. See Column 5, lines 18-49. The surface treating agent is at least one member selected from the group consisting of higher fatty acids, coupling agents and alcohol phosphoric esters.

However, Imahashi et al. neither disclose nor suggest phosphorus-containing compound particles surface treated with at least one surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organopolysiloxane and a dispersant

having a carboxyl group. In addition, Imahashi et al. are silent with regard to a curing agent. Imahashi et al. are also silent with regard to their compositions being used as an insulating layer for PWB.

On the other hand, the varnish of the present invention ensures that the flame retardant has improved dispersion stability, and prevents agglomeration of the flame retardant particles even under high-temperature and humidity conditions. The electrical insulation film obtained by use of the varnish of the present invention is improved not only in interlayer insulation, but also in resistance to high temperature-and-humidity. A multilayer circuit board having an electrical insulation film of the invention is usable as a printed wiring board for mounting semiconductor devices such as CPUs or memories, and many other mounting components in electronics such as computers and cellular phones.

Further, the present invention provides a process for the preparation of flame retardant particles for incorporation in the aforementioned varnish, a flame retardant slurry containing the flame retardant particles, and a varnish preparation process using the flame retardant slurry.

There is no disclosure or suggestion by Imahashi et al. relating to the improvements provided by the presently claimed invention.

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP §2143.03. It is respectfully submitted that all of the limitations of claims 1-4 and 6-25 are not disclosed or suggested by Imahashi et al., and that the rejection under 35 U.S.C. 103 (a) has been overcome. Withdrawal of this rejection is respectfully requested.

Double Patenting

Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting, as unpatentable over claims 1, 4-6, 8-9, 13, 32-34, 36, 38, and 40 over

copending Application No. 10/398,284. For the following reasons, this rejection is respectfully traversed.

Copending Application No. 10/398,284 does not disclose phosphorus-containing compound particles surface treated with at least one surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organopolysiloxane and a dispersant having a carboxyl group.

Copending Application No. 10/398,284 discloses that contact of flame retardants with coupling agents causes the coupling agents to be physically or chemically bonded to the surface of the flame retardants to reduce the aggregation properties of the flame retardants, improving the dispersibility in varnish or insulating resins. See Application No. 10/398,284 page 23, lines 16-20. Coupling agents include silane compounds, metal ester compounds, metal complex compounds, and metal chelate compounds. See page 23, lines 21-24.

However, copending Application No. 10/398,284 does not disclose a surface treatment agent selected from the group consisting of a phosphorus compound soluble in an organic solvent, an organopolysiloxane and a dispersant having a carboxyl group. Furthermore, there is no disclosure or suggestion by copending Application No. 10/398,284 relating to the above discussed improvements provided by the presently claimed invention.

It is therefore respectfully submitted that the presently claimed invention is not obvious over claims 1, 4-6, 8-9, 13, 32-34, 36, 38, and 40 of copending Application No. 10/398,284. Accordingly, withdrawal of this rejection is respectfully requested.

CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact J. Mark Konieczny (Reg. No. 47,715) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted, #28977

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